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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/614,186	07/08/2003	Randy McKay	85229-102 ADB	7098

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ADE & COMPANY
1700-360 MAIN STREET
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CANADA

EXAMINER

BHAT, NINA NMN

ART UNIT PAPER NUMBER

1764

DATE MAILED: 10/27/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/614,186

Applicant(s)

MCKAY ET AL.

Examiner

N. Bhat

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 08 July 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☒ Claim(s) 20 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 08 July 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: _____

DETAILED ACTION

1. Claim 20 is objected to because of the following informalities: In claim 20, applicant recites that the catalytic heat comprises a "Cata-DyneTM heater" which is a trademark. Using a trademark product in drafting claims is improper. Applicant is required to avoid the use of trademarked or trade secret constituents in when drafting the claims and use the generically known article or apparatus, constituent or ingredient. Appropriate correction is required.

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

4. Claims 1-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Beida et al. in combination with Cata-Dyne heaters catalytic heaters-CCI Thermal Technologies Catadyne Technical bulletin, www.ccithermal.com.

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Beida et al. teach the invention substantially as claimed. Beida et al. teach a method and apparatus for heating preventing freeze-off of well heat equipment, which utilizes radiant heat from a catalytic infrared heater, which is then positioned and arranged to heat a fluid in a heat exchanger such as a tank or a finned radiator. Specifically, Beida et al. teach placing a heat exchanger filled with fluid in close proximity to the heating element of a fan infrared catalytic gas heater, such that the heat for the catalytic heater is transferred to the fluid in heat exchanger by radiation emanating from the heat radiating element of the infrared catalytic heater.[Note Column 2 lines 50 through Column 3, lines 67]. The heat exchanger can be a simple tank or it can be a finned radiator, which is generally a shell and tube type heat exchanger.

Admittedly, Beida does not teach applicant's specific catalytic heater or Cata-Dyne heater including the catalytic pad arrangement wherein a heat exchanger tube extends across the heat-radiating surface.

Cata-Dyne heaters are commercially available heaters from CCI Thermal Technologies, Inc., which includes a catalyst pad constructed of ceramic fibers, and contain catalytic materials, which form the basis for catalytic reactions. The pad is heated by using a low watt electric element, which heats the catalyst pad to at least 120°C at which time the fuel is introduced into the catalytic heater and is dispersed through the catalyst pad. At the same time oxygen from the air diffuses through the heater and once the oxygen and fuel converge on the pad, catalytic reaction takes place thereby resulting in flameless combustion and the creation of infrared energy. The Cata-Dyne heater can be used a source where infrared radiant heat is required.

The Cata-Dyne heaters are equipped with thermocouples and heat monitoring control equipment as specifically taught in the technical bulletin.

It is maintained that although Beida et al. does not specifically recite applicant's specific type of infrared catalytic heater, an infrared catalytic heater has been taught and used and that the heat exchanger is positioned such that the heat exchanger is positioned sufficiently close to the heat radiating element of the catalytic heater such that the fluid within the heat exchanger can be heated by radiant heat from the infrared heater which is the same principle to be achieved by applicant's invention thus the concept of using a catalytic heater which provides a surface which provides infrared radiant heat which is in abutting relationship with a heat exchanger which can as simple as a vessel, a tube or a finned radiator which is typically a shell and tube heat exchanger. It is maintained that the combined teachings of Beida et al. and Cata-Dyne heaters as described by the CCI Thermal Technologies technical bulletin fairly teaches and suggests applicant's method and apparatus as a whole to one having ordinary skill in the art at the time the invention was made.


5. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Loreck teach a catalytic burner. Smith et al. teach a catalytic heater head. Cessac teach low power starter for catalytic heaters. Chapurin teach flameless gas catalytic heaters. Pfender teach a catalytic heater and system for preheating internal combustion engines by transmission and infrared radiation.

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6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to N. Bhat whose telephone number is 571-272-1397. The examiner can normally be reached on Monday-Friday, 9:30AM-6:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Glenn Caldarola can be reached on 571-272-1444. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


N. Bhat
Primary Examiner
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